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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DEMICO, MATTHEW R

ART UNIT

PAPER NUMBER

2611

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/539,228

Applicant(s)

GORDON ET AL.

Examiner

Matthew R Demicco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is responsive to an RCE filed 1/8/04. Claims 1-8 are pending. Claims 1 and 5-7 are amended.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over IEEE Publication, "The Use of Multicast Delivery to Provide a Scalable and Interactive Video-on-Demand Service" by Almeroth et al.

Regarding Claim 1, Almeroth discloses the multicast of interactive video-on-demand programming to a set-top box (P. 1110) in a television cable network (P. 1111, Col. 1, Lines 20-23). A server receives customer requests and creates streams to deliver the requested content (P. 1111, Col. 2, Lines 11-14). The server groups customers who make requests at a similar time into a single multicast channel (P. 1112, Col. 1, Lines 26-

36) such that more than one customer may be watching the same stream (P. 1114, Col. 1, Lines 13-14). When a user performs an interactive command, the server will address it by switching the viewer to an existing stream or creating a new video stream (P. 1114, Cols. 1-2, Lines 22-2 and P. 1115, Col. 1, Lines 22-24). When leaving a stream, if the viewer was last viewer of the multicast, the unused stream will be de-allocated (P. 1116, Col. 2, Lines 39-51). It is inherent that the server must keep track of all the streams that it has created and to provide this information to the client so that the client can “jump” to different streams that satisfy the interactive commands as stated above. This reads on the claimed digital message from a transport stream generator (server) to a terminal (set-top box). The message comprises the list of demand-cast streams as stated above that are available in a transport stream being transmitted from the transport stream generator. The creation of a new stream in response to a client’s interactive request as stated above reads on the claimed different demand-cast stream added to the list in response to a request by a terminal, the stream being accessible as long as at least one other terminal is associated with the different stream. What is not disclosed, however, is that the demand-cast streams comprise imagery associated with a respective program guide page. Official Notice is taken that it is well known in the art to use an electronic program guide to list, and provide users with a means for making a selection, of television programming including video-on-demand content. The video content disclosed by Almeroth, when listed in the electronic program guide of the well-known prior art reads on the claimed demand cast streams comprising imagery (video programming) associated with (listed in) a respective program guide page. Therefore, it would have been obvious to one having ordinary skill

in the art at the time the invention was made to modify the video-on-demand system of Almeroth with the EPG of the well-known prior art in order to facilitate the locating and selecting of desired programming.

Regarding Claim 5, Almeroth discloses a method for communicating from a transport stream generator to a terminal comprising sending to the terminal a list of demand-cast streams that are available in a transport being transmitted from a transport stream generator, each of the demand cast streams comprising imagery associated with a respective program guide page as stated above in Claim 1. Further, the list comprises a different demand-cast stream that is added when a request by a terminal, which is accessible from the list as long as one other terminal is associated with the different demand-cast stream as stated above.

Regarding Claim 6, Almeroth discloses a system as stated above in Claim 1. The server allocates and de-allocates streams based on requests by clients as stated above. Therefore, it is inherent that there must be a process, as part of the server that handles these "sessions." This reads on the claimed session manager. Further, the set-top terminal of Almeroth sends a request to the server as stated above and the server is aware when the client is viewing the stream and when the client has left the stream such that the server can de-allocate resources that are no longer being used as stated above. This reads on the claimed sending to the session manager an acquisition message when the terminal acquires a demand-cast stream that is available for association of the terminal with the stream by the session manager, and sending a release message when the terminal releases the stream. Further, Almeroth discloses an interactive request from the set-top that results

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in a new movie stream being created as stated above in Claim 1. This reads on the claimed sending to the session manager a request message when the terminal needs to acquire a demand-cast stream that is unavailable.

Regarding Claim 7, Almeroth discloses a system as stated above in Claims 1 and 6. As stated above, the transport stream generator is operable to release a stream when there are no longer any terminals acquiring the stream. Therefore, the claimed release message sent to the generator is inherently taught. Almeroth discloses sending to the transport stream generator a stream requested message when a terminal request a demand-cast stream that is not currently provided by the generator for acquiring the stream for the terminal, associating the terminal and other terminals that request the stream with the stream as stated above.

Regarding Claim 8, Almeroth discloses a method as stated above in Claim 7. Almeroth inherently teaches a session manager which tracks active streams as stated above. Therefore, it is inherent that the session manager be alerted when the transport stream generator releases a stream or starts up a new stream such that session manager can update the table information. This reads on the claimed acknowledgement messages.

5. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almeroth et al. in view of U.S. Patent No. 6,314,569 to Chernock et al.

Regarding Claim 2, Almeroth discloses a system as stated above in Claim 1. What is not disclosed, however, is a digital address for the transport stream generator and an identifier for a multiplexer channel within the transport stream generator. Chernock

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discloses a video overlay system using MPEG-2 transport to carry non-video data in a private data stream (Col. 4, Lines 41-55). Chernock also discloses the use of program specific information that carries information regarding which streams are multiplexed into the transport stream and what they carry. This reads on the claimed identifier for a multiplexer channel within the transport stream generator. Chernock is evidence that ordinary workers in the art would recognize the benefits of using MPEG streams with multiplexed non-video data and program-specific information data to identify these streams. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Almeroth with the MPEG streams of Chernock in order to embed and transport auxiliary data along with video and audio streams using a well-known and established standard. What Almeroth in view of Chernock do not disclose, however, is a digital address for the transport stream generator. Official Notice is hereby taken that it is well known in the art that in a bi-directional communication system such as the one disclosed by Almeroth, a digital address may be used to identify any device on the network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Almeroth in view of Chernock with the digital address of the well-known prior art in order to facilitate addressing and routing in a bi-directional network.

Regarding Claim 3, Almeroth discloses a system as stated above in Claim 1. Further, Almeroth in view of Chernock disclose a method as stated above in Claim 2 wherein MPEG streams are used to transport digital data along with video programming

in the private section of the transport stream as stated above. The list of available programming streams reads on the claimed table.

Regarding Claim 4, Almeroth in view of Chernock disclose a system as stated above in Claim 3. What is not disclosed is a table version number that is incremented when the digital message changes. Official Notice is hereby taken that it is well known in the art that a version number may be included in a table and be incremented when the data is updated. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Almeroth in view of Chernock with the table version number of the well-known prior art in order to signal the recipient of the table data when the data is updated so it can properly process the changes.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 6,543,053 to Li et al. discloses a multicast VOD system with stream reassignment in batching of multiple users.
- b. U.S. Patent No. 5,673,430 to Story discloses a multicast program delivery system for a cable head-end supporting VOD.
- c. U.S. Patent No. 5,844,620 to Coleman et al. discloses an IPG trickle stream and on-demand stream providing database pages on a packetized transport stream.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew R Demicco whose telephone number is (703) 305-8155.

The examiner can normally be reached on Mon-Fri, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



mrd  
March 31, 2004



**VIVEK SRIVASTAVA**  
**PRIMARY EXAMINER**